

REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Claim 17 has been amended to address formal matters. Previously submitted claims 28-30 have been renumbered as claims 25-27 as suggested by the Examiner. Claim 26 is canceled without prejudice or disclaimer. Claim 25 has been amended to include the allowable subject matter of claim 10 rewritten in independent form. Amendments to claim 27 are supported by at least Figure 1 and the description at page 8 of the present application. New claims 28-30 have been added and are supported by claims 1 and 24. No new matter has been added.

§102 Rejections

Claims 1-3, 6, 15, 16 and 28 were rejected under 35 U.S.C. §102(b) as being anticipated by Wiles (U.S. 5,505,036). Applicants respectfully traverse this rejection. Claim 28 has been renumbered as claim 25, and claim 25 has been amended to include the allowable subject matter of claim 10. Therefore, this rejection is moot as to former claim 28.

Wiles discloses a composite cross arm 12 having first and second load walls 20, 22 joined by spaced apart sidewalls 24. A pair of holes 26 are formed in the walls 20, 22 and aligned for receiving a bolt 28. A steel sleeve 42 is positioned within the arm 12 in alignment with the pair of holes 26. A second pair of transverse holes 50 are formed in the sidewalls 24 and extend perpendicular to the holes 26 in alignment with a central bore 44 of the sleeve 42. The holes 50 are sized to receive a steel rod 48 that extends into holes 46 formed in an exterior side surface of the sleeve 42. However, there is no sleeve aligned with the holes 50. Therefore, Wiles fails to disclose "one hollow reinforcing member being aligned with each transverse hole," as required by claim 1 and the claims that depend from it. Withdrawal of the rejection is respectfully requested.

§ 103 Rejections

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unparentable over Wiles.

Applicants respectfully traverse this rejection. As noted above, Wiles fails to disclose every limitation of claim 1. Applicants further submit that Wiles fails to suggest every limitation of claim 1. Therefore, claim 4 is allowable for at least the reason it is dependent upon an allowable base claim. Applicants do not concede the correctness of this rejection.

Claim 7 was rejection under 35 U.S.C. § 103(a) as being unpatentable over Wiles in view of Fingerson (U.S. 5,605,017) and Hawley's Chemical Dictionary. Applicants respectfully traverse this rejection.

The rejection asserts that it would have been obvious to make the sleeves 42 of Wiles of fiber reinforced plastic for the purpose of making the sleeves 42 lighter. Applicants submit that making a sleeve lighter is not a desired purpose or function of the reinforcing member required by claim 7, and that there are distinct differences between a fiber reinforced plastic (as disclosed by Hawley's Chemical Dictionary) and a fiber reinforced resin that render the reasoning in the rejection improper.

A fiber reinforced plastic maintains many basic properties of any plastic including, for example, a propensity to creep, a relatively low modulus of elasticity, and relatively low strength. In contrast, a fiber reinforced resin is a composite material that has properties of negligible creep, a relatively high modulus of elasticity, and relatively high strength. One structural feature of fiber reinforced resins that is advantageous for applications such as the reinforcing member of claim 7 is that the fibers can be aligned in a specific direction, thereby providing additional strength and resistance to creep and deformation. In a fiber reinforced resin, the resin holds the fibers together and functions to transfer the load to the fibers. A fiber

reinforced plastic typically does not have fibers aligned in any specific direction and the fibers are used merely to modify the plastic.

The two-piece plastic bushings 30, disclosed by Fingerson must be injection molded in order to provide an integral hollow inner member 32 and washer 34 configuration. A fiber reinforced resin is not compatible with an injection molding process. Further, when making the bushings 30 from a plastic material, the hollow inner member 32 must have additional structure such as the washer 34 in order to have sufficient strength to avoid crushing of the bushing. Because the hollow reinforcing members of the claimed invention do not include integral washer features, using a plastic material would provide insufficient strength for the given application.

In view of the above, Applicants submit that Wiles, Fingerson, and Hawley's Chemical Dictionary fail to disclose the limitations of claim 7.

Claims 12, 29 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wiles in view of Koye (U.S. 6,347,488). Applicants respectfully traverse this rejection. Claim 29 has been renumbered as claim 26 and is canceled. Therefore, this rejection is moot as to original claim 29. Claim 30 has been renumber as claim 27 and is amended to include different limitations from those originally claimed. Renumbered claim 27 will be discussed further below.

As discussed above, Wiles fails to disclose or suggest every limitation of claim 1. Koye fails to remedy the deficiencies of Wiles as it relates to claim 12. Therefore, claim 12 is allowable for at least the reason it is dependent upon an allowable base claim. Applicants do not concede the correctness of this rejection.

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wiles in view of Koye and further in view of Fingerson. Applicants respectfully traverse this rejection. As

discussed above, Wiles fails to disclose or suggest every limitation of claim 1. Koye and Fingerson fail to remedy the deficiencies of Wiles as it relates to claim 1. Therefore, claim 13 is allowable for at least the reason it is dependent upon an allowable base claim. Applicants do not otherwise concede the correctness of this rejection.

Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wiles in Hoyt (U.S. 2,318,396). Applicants respectfully traverse this rejection. As discussed above, Wiles fails to disclose or suggest every limitation of claim 1. Hoyt fails to remedy the deficiency of Wiles as it relate to claim 1. Therefore, claim 17 is allowable for at least the reason it is dependent upon an allowable base claim. Applicants do not concede the correctness of this rejection.

New and Changed Claims

Renumbered claim 27 (formerly numbered as claim 30) has been amended to require that "each transverse hole being the only transverse hole through the beam at any position along the length of the beam." Claim 28 has been added as a new method claim and requires that "each of the plurality of holes being formed in the beam at spaced apart locations along a length of the beam", and "positioning a separate one of the plurality of hollow fiber reinforcing member within the beam in alignment with each of the plurality of holes." Claim 30 has been added as a new dependent claim from claim 1 and requires that "only one of the plurality of transverse holes extends through the beam at each longitudinal position along a length of the beam."

Wiles discloses the use of holes 26 (as described above) and also holes 50 at a given position along the length of the cross arm 12. Holes 50 are sized to receive a steel rod 48 that extends into holes 46 formed in an exterior side surface of the sleeve 42. Thus, there are two pairs of holes 26, 50 formed in the arm 12 rather than a single transverse hole at each position

along the length of the beam as required by claims 27, 28 and 30. None of the other art of record, either alone or in combination with Wiles, discloses every limitation of claims 27, 28 and 30.

Claim 29 is a new method claim that tracks the limitations of allowed claim 24 including a limitation directed to filing the beam with a foam. Applicants submit that new claim 29 is allowable for the same or similar reasons as claim 24.

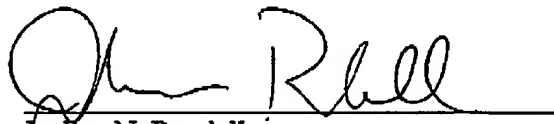
Consideration and allowance of claims 27-30 is respectfully requested.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance. If a phone conference would be helpful in resolving any issues related to this matter, please contact Applicants' representative below at 612-371-5387.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Date: 5-21-04


Joshua N. Randall
Reg. No. 50,719
JNR:ae